

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-11. (Cancelled)

12. (New) A method of producing a part made of a silver-based alloy using an initial alloy, said initial alloy comprising silver and at least one metal soluble in silver at contents between 0.04 and 4 atomic%, the at least one metal being capable of forming a stable oxide at high temperature, the method comprising:

oxygenation of said initial alloy at a temperature of about 300°C, so as to dissolve oxygen into the silver contained in said initial alloy;

partial oxidation of said at least one metal at a temperature of between 400 and 850°C, so as to form precipitate particles that prevent alloy grains from coarsening; and

complete oxidation of said at least one metal at a temperature of between 400 and 850°C, wherein said oxidation takes place in at least an outer layer of said alloy, and wherein said at least one metal forms an oxide stable at high temperature.

13. (New) The method according to claim 12, wherein said oxygenation is carried out by exposing said initial alloy to a stream of oxygen.

14. (New) The method according to claim 12, wherein said initial alloy is a part having the desired final form, and wherein said complete oxidation takes place immediately after said partial oxidation.

15. (New) The method according to claim 13, wherein said initial alloy is a part having the desired final form, and wherein said complete oxidation takes place immediately after said partial oxidation.

16. (New) The method according to claim 12, wherein said initial alloy is a part having an intermediate form chosen from a group comprising wire, tube, and strip, wherein said partial oxidation is carried out by placing said oxygenated part for about one hour in a vacuum or in an inert atmosphere, and wherein said part is made into its final form before the complete oxidation thereof.

17. (New) The method according to claim 13, wherein said initial alloy is a part having an intermediate form chosen from a group comprising wire, tube, and strip, wherein said partial oxidation is carried out by placing said oxygenated part for about one hour in a vacuum or in an inert atmosphere, and wherein said part is made into its final form before the complete oxidation thereof.

18. (New) The method according to claim 12, wherein said initial alloy is in the form of a powder, wherein said powder is compacted before said oxygenation while maintaining an open porosity over its entire thickness, wherein the part thus obtained after said oxygenation is extruded hot, causing the part to undergo said partial oxidation, and wherein said part is made into its final form before the complete oxidation thereof.

19. (New) The method according to claim 13, wherein said initial alloy is in the form of a powder, wherein said powder is compacted before said oxygenation while maintaining an open porosity over its entire thickness, wherein the part thus obtained

after said oxygenation is extruded hot, causing the part to undergo said partial oxidation, and wherein said part is made into its final form before the complete oxidation thereof.

20. (New) The method according to claim 12, wherein said initial alloy is in the form of a powder, wherein said powder is compacted after said oxygenation, wherein the part thus obtained after said oxygenation is extruded hot, causing the part to undergo said partial oxidation, and wherein said part is made into its final form before the complete oxidation thereof.

21. (New) The method according to claim 13, wherein said initial alloy is in the form of a powder, wherein said powder is compacted after said oxygenation, wherein the part thus obtained after said oxygenation is extruded hot, causing the part to undergo said partial oxidation, and wherein said part is made into its final form before the complete oxidation thereof.

22. (New) The method according to claim 12, wherein said complete oxidation is carried out by exposing said alloy to an oxidizing atmosphere.

23. (New) The method according to claim 13, wherein said complete oxidation is carried out by exposing said alloy to an oxidizing atmosphere.

24. (New) The method according to claim 14, wherein said complete oxidation is carried out by exposing said part to an oxidizing atmosphere.

25. (New) The method according to claim 16, wherein said complete oxidation is carried out by exposing said part to an oxidizing atmosphere.

26. (New) The method according to claim 18, wherein said complete oxidation is carried out by exposing said part to an oxidizing atmosphere.

27. (New) The method according to claim 20, wherein said complete oxidation is carried out by exposing said part to an oxidizing atmosphere.

28. (New) A silver-based alloy comprising at least one metal soluble in silver and capable of forming a stable oxide at high temperature, wherein said alloy is hardened through internal oxidation and has a final grain size of less than 20 μm .

29. (New) The alloy according to claim 28, wherein said alloy does not contain nickel.

30. (New) The alloy according to claim 28, wherein said at least one metal is selected from magnesium, aluminum, titanium, gallium, manganese, and zinc.

31. (New) The alloy according to claim 28, wherein the content of said at least one metal, alone or in combination, is between 0.04 and 4 atomic%.

32. (New) The alloy according to claim 30, wherein the content of said at least one metal, alone or in combination, is between 0.04 and 4 atomic%.